Goddard Space Flight Center

PROFILE BOOK

June 3, 2002 – August 9, 2002

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JULIE ARNOLD

Massachusetts Institute of Technology
Aerospace Engineering
Bachelor of Science, May 2004

NASA Academy Research Project:

Development and Characterization of Breadboard Optical Systems for NGST
Principal Investigator: Pam Davila; Code 551

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Present Address:
362 Memorial Drive
Cambridge, MA 02139

Permanent Address:
3 Charm Court
Holmdel, NJ 07733

WORK EXPERIENCE

- Translife Mars Gravity Biosatellite Project (2/02-present)
  Involved in design and manufacturing of a satellite intended to study effects of Martian gravity on mice. Working in the Habitat Design and Manufacturing subgroups.
- MIT Undergraduate Research Opportunity Program (UROP) (9/01 – 1/02)
  Formulated an economic break-even analysis comparing the total cost of a monolithic telescope system with the total cost of a modular golay telescope system under various performance constraints. I gained experience with Matlab and thorough research techniques.
- NASA Goddard Space Flight Center - Internship (7/99)
  Designed test structure for the secondary mirror of the Next Generation Space Telescope optical test bed. Learned Finite Element Analysis and CAD software. I gained valuable hands-on experience in a project where accuracy and deadlines are critical.
- Bell Laboratories- Mentorship (9/99 – 1/00)
  Modeled wireless communication systems to maximize cellular coverage for client. My experience provided me with insight on how to engineer a system that will meet technical requirements as well as satisfy the customer.

SKILLS

Proficient in AutoCAD, Matlab, Microsoft Office, Macintosh, and Visual Basic. Exposure to ProEngineering, C++.

Awards

- Mount Holyoke Award for Academic Excellence
- National Merit Semi-Finalist
- National Merit Scholar

HOBBIES AND INTERESTS

I love flying; I'm current working on my private pilots' license. I grew up by the New Jersey coast, and enjoy just about anything that gets me out in the water. I've instructed sailing at the Atlantic Highland's Yacht club for two years, and I have recently taken up scuba diving.

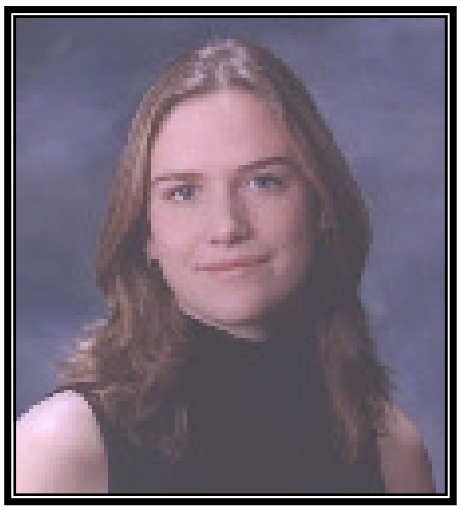
Yale University

Astronomy & Physics

Bachelor of Science, May 2002

NASA Academy Research Project:
A Holographically Speckle Corrected Telescope

Principal Investigator: Dr. Richard Lyon; Code 935



E-mail: olivia.billet@yale.edu

Present Address:
236 Park Street
New Haven, CT 06511

Permanent Address:
38 Clifton Avenue
Yonkers, NY 10705

WORK EXPERIENCE

Yale University

Senior Project: Analyzing correlation of BL Lac objects to their host galaxies at redshifts between 0.5 and 1.5

Physics tutor

Research Assistant, Lowell Observatory

Performed analysis and data reduction on Hubble Space Telescope images, Co-Authored Compact Star Clusters in Nearby Dwarf Irregular Galaxies (AJ, March 2002)

Research Assistant, The Basex Group

Conducted internet research of software packages for clients, Developed individual client databases

Database Administrator, Mountbatten Internship Programmer

Assembled and maintained Lotus Notes database system

SKILLS

Microsoft Office, Lotus Notes, UNIX, IDL, IRAF, C, LotusScript

AWARDS AND ACTIVITIES

Biked and camped through Himalayas of Tibet and Nepal, Theater: Lighting Designer and Master Electrician, Yale Women's Crew (Varsity Level), Green corps (National environmental group focused on grassroots activism)

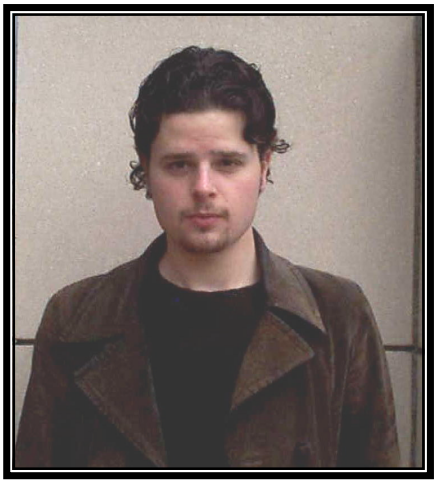
HOBBIES AND INTERESTS

Anything outside, especially water sports!, theater (working in it), art (drawing it) or music (playing it), traveling anywhere

University of Washington

Physics & Astronomy
Bachelor of Science, June 2002

NASA Academy Research Project:
Improved Position Encoders with Super-conducting Resonant Noise Capacitimetry
Principal Investigator: Dr. Dominic J. Benford; Code 685
Co-Investigator: Dr. S. Harvey Moseley; Code 685



E-mail : justusb@u.washington.edu

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Seattle, WA 98125

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6013 NE Bonner Dr.
Vancouver, WA 98665

Work Experience

Heteroepitaxal Growth Lab (Winter-Spring terms '02)

Prof. Marjorie Olmstead, University of Washington, Dept. of Physics; Responsible for designing and constructing a system to remove dynode contaminants on electron multiplier tubes**.**

Low Temperature Ferromagnetism (Summer term '01)

Prof. Tom Rosenbaum, University of Chicago, James Franck Institute, University of Chicago REU, responsible for weekly lecture attendance, group presentation and research paper. Studied susceptibility resonance in ising ferromagnet at mK range using dilution fridge.

Sonoluminescence (Spring term '01)

Prof. Tom Matula, University of Washington, Applied Physics Lab, Studied and documented effects of surfactants on cavitation fields. Primarily interested in environmental applications of sonoluminescence to fusion research and toxic waste disposal.

Experimental Gravitation (Mar. '99—Nov. '99)

Prof. Paul Boynton, University of Washington, Dept. of Physics/Astronomy; Responsible for reduction of magnetic contamination at torsion pendulum in non-newtonian force study. Also completed extensive set of sketches in Unigraphics used in fabrication of future experiment.

Computer Skills

LabView, Mathematica, Unigraphics, AutoCAD, Kaleidograph, Microsoft Office.

AWARDS AND ACTIVITIES

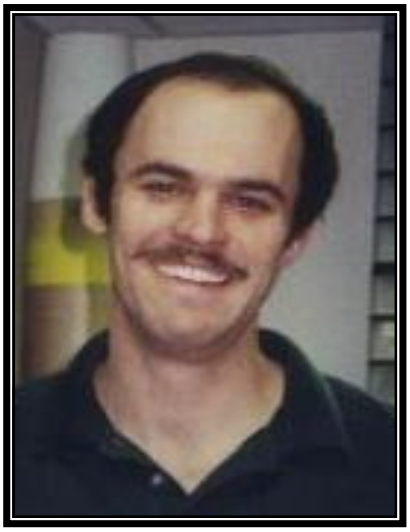
Undergraduate Curriculum Board Student Rep. Department of Physics, Vice President, Society of Physics Students, Executive Chair, Senior Class Gift Committee, Student Health Advisory Committee, Executive Counsel Member Theta Xi Fraternity (1998-1999)

HOBBIES AND INTERESTS

Russian language and culture, Backpacking, mountaineering and rock climbing, travel and tour cycling, Culinary arts, Raquetball, Salsa dancing, and Creating tile mosaics
I attempt to live my youth with the goal of being a grandfather with far more stories than any grandchild could ever hear.

University of Alaska Fairbanks
Electrical Engineering
Bachelor of Science, December 2000

NASA Academy Research Project:
Optical Pulse Compression Using Polarization Modulation for Lidar Applications
Principal Investigator: Dr. John Cavanaugh; Code 544



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Fairbanks, AK 99709

WORK EXPERIENCE

Alaska Space Grant Student Rocket Project – (Research Assistant)

Lead electrical team in design, fabrication, and testing of a standardized sounding rocket payload

Alaska Space Grant Student Rocket Project – (Student Assistant IV)

Design and fabrication of sounding rocket payload electrical modules

UAF Power Electronics Lab – (Student Assistant IV)

Lab assistant in support of an autonomous vehicle "smart motor" development project

Skills

Familiar with MATLAB, Cadence, OrCAD, and HP Advanced Design System software packages. Working knowledge of UNIX.

AWARDS AND ACTIVITIES

IEEE – student member, Student Branch Secretary (1999)

Tau Beta Pi – member, Secretary for Alaska Alpha Chapter (January 2000 – May 2001)

University of Alaska Fairbanks Electrical Engineering Student of the Year – (2001)

HOBBIES AND INTERESTS

Martial Arts (Nidan in Tracy Kenpo, Shodan in Shisei-ryu Aikijutsu)

Scuba Diving (NAUI Master Diver)

Amateur Radio (AL1B)

Furman University

Computer Science

Bachelor of Science, June 2003

NASA Academy Research Project:
Parallel/Distribute Software Development
Principal Investigator: John Dorband; Code 935

E-mail: michael.elder@mindspring.com

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603 Poplar Drive
Greer, SC 29651-4021

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WORK EXPERIENCE

International Business Machines Corporation (IBM) (Cambridge, MA)

Extreme Blue Intern Raven/Extreme KDS Team. (June 2001 – August 2001) Prototyped potential extensions to the Lotus Knowledge Discovery Server (KDS) to visualize knowledge trends over time and social networks from data maintained by the KDS

Exim Technologies. (Greenville, SC). *Java Developer.* [March 2000 – October 2001]

Worked in a team environment to design and implement a Business to Business (B2B) application built on the Java 2 Enterprise Edition Platform (J2EE) and the Extensible Markup Language (XML)

Furman University (Greenville, SC) Furman Advantage Research Internship [Summer 2000]

Effected the modernization of NASA scientific legacy code written in FORTRAN through the design of an original Distributed Application Wrapper Architecture in support of NASA's TIMED satellite mission + More

Computer Skills

Programming Languages: Java 2 Platform (J2SE, J2EE) (including XML / XSLT) [2+ yrs], C++ [3 yrs] (including 1+ yrs with STL), Universal Modeling Language (UML) [1+ yr], SQL [2+ yrs], Virtual Reality Modeling Language (VRML) +More

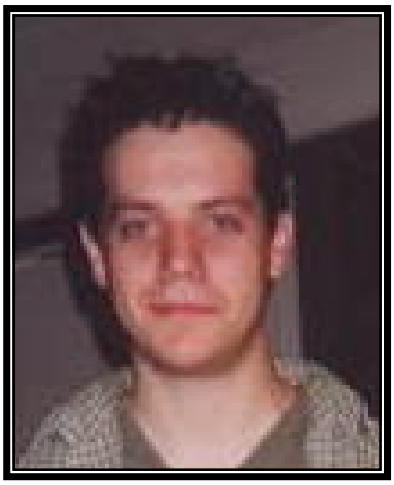
AWARDS AND ACTIVITIES

First Place (Undergraduate Category), ACM International Student Research Contest 2001, Honorable Mention (Graduate/Undergraduate combined), ACM 39th Annual Southeast Conference Student Paper Competition 2001, First Place (Bachelor's Degree Category), ACM Mid-SE Chapter Fall Conference Student Paper Competition 2000, + More

HOBBIES AND INTERESTS

Enterprise-level, distributed applications using the Java 2 Enterprise Edition (J2EE), Cryptography, Origami, and Poetry by EE. Cummings, making bad jokes and insufferable puns, collecting shot glasses from places I've visited, using the word "yo" frequently.

Yo, I'm not a big fan of personal statements because I think they are much like taking a snapshot of a movie screen during a full-length feature. That said, let me break into the paradox of attempting it. I am from the South – but I don't have much of a Southern dialect. I like sweet tea, so for those of you unfamiliar with this topic, we will shortly have to remedy that. Of the building blocks that make up my experience in life, I find those interactions with passionate people to be the most rewarding. I think I'll end this rant with a quote from one of my favorite bands, "When ignorance reigns, life is lost."



The Johns Hopkins University
Physics
Bachelor of Science, May 2003

NASA Academy Research Project:
Analysis of Cosmic Microwave Background (CMB) Radiation
Principal Investigator: Dr. Alex Kashlinsky; Code 685

E-mail: pgosling@mail.arc.nasa.gov

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3003 North Charles Street, Apt
Baltimore, MD 21218

WORK EXPERIENCE

Aug '00 – Present

Civil Servant, NASA Ames Research Center, Earth Sciences Directorate

Designed, carried out, and analyzed data from ongoing experiments in the following areas: *Physics*: Studied Peroxy defects in granite and other igneous rock. When such rock undergoes stress, heat, erosion and microfracturing, a lower energy state can be achieved by releasing a positive-hole oxygen radical (O-) that propagates freely. Before earthquakes these give Earth's surface a positive charge and tug on the ionosphere, facilitating possible seismoelectromagnetic earthquake detection and forewarning. The radicals may also explain the baffling 'Mars Oxidant' found by the Viking landers.

Aug '99 – Aug '00 Civil Servant, NASA Ames Research Center, Vertical Motion Simulator

Provided support for testing procedures, helped troubleshoot hardware/software problems, drafted technical diagrams, and learned to work with integrated systems modeling and verification software. Received NASA Spotlight Award. Resigned to transfer to Earth Sciences Directorate.

SKILLS

Strong knowledge of AutoCAD. Familiarity with LabView, MathX and Visio. Basic working knowledge of Fortran. Basic German. Two turntables and I'll rock the house.

AWARDS AND ACTIVITIES

Vice president, JHU Society of Physics Students, President, Phi Kappa Psi Fraternity 2002 pledge class, Aug '99 – Present: Spartnik: SJSU microsatellite design and fabrication project. As a sophomore, proposed a switch mechanism to power up the satellite once in orbit. Mine was chosen over two entries from senior AE majors. Presented the project on behalf of the team to Dr. Stone, director of JPL, at American Astronautical Society meeting (Pasadena, 1999). Please see 'Spartnik Team' at www.engr.sjsu.edu/spartnik.

HOBBIES AND INTERESTS

"I was born in St. Albans, England. My parents divorced one year later, and my mother emigrated with me to the U.S., obtaining U.S. citizenship for us. At 17 I was adopted by my best friend's family. After high school I took a year off to save up for college. I was and remain today financially independent, paying for my education with financial aid and my earnings. I then started at the affordable San Jose State University, joining NASA as a civil servant at beginning of my sophomore year. After deciding to major in physics I wanted a more rigorous structure in which to study it. At the end of sophomore year Hopkins offered a grant and I transferred to their physics program. I pay for the rest as a party dj and physics tutor."

OMAR MIRELES

New Mexico State University
Mechanical Engineering
Bachelor of Science, May 2002

NASA Academy Research Project:
Hubble Space Telescope Instrument Development
GSFC Principal Investigator: Jill Holz Project Code: 543

E-mail: wikkie@juno.com

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WORK EXPERIENCE

Work and research experience have included eclipsing binary star system research with the NMSU astronomy department, completed two co-op tours at the NASA Jet Propulsion Laboratory developing drill/subsurface exploration technology for Mars exploration as well as payload design, and founded the NMSU Flying Aggies. The Flying Aggies are an undergraduate research team that designs, develops, and conducts microgravity experiments as a part of the NASA Reduced Gravity Student Flight Opportunities Program. This group represents the first NMSU team to fly an experiment aboard NASA's KC-135 or *"Weightless Wonder."* I am the team leader and also a flyer, flying two experiments in August 2001 and March 2002.

HOBBIES AND INTERESTS

I am active in my extracurricular activities, which include reading, hiking, rock climbing, weight lifting, running, amateur astronomy & geology, scuba diving, skydiving, and I'm trying to save enough money to start flying. Currently, I am conducting a series of experiments to better understand the aerodynamics of the human body in free fall and determining the effectiveness of skydiving techniques on extreme high altitude crew escape systems.

My educational goals are to begin graduate studies this fall at Georgia Tech and obtain a Ph D in mechanical engineering focusing on mechatronics or combustion/energy/thermal systems.

University of Kansas
Aerospace Engineering
Bachelor of Science, May 2003

NASA Academy Research Project:
Finger Detectors: Simple Far Infrared/Submillimeter-Wave Polarization Diplexers
Principal Investigator: Dr. Robert Silverberg; Code 685

E-mail: smliddle@ku.edu

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Lawrence, KS 66044

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Lawrence, KS 66044

WORK EXPERIENCE

University of Kansas, Department of Aerospace Engineering

Undergraduate Research Assistant, Measured the vibrations of acoustic panels in an aircraft environment using a Scanning Laser Vibrometer, Studied the internal acoustics of a simulated airplane fuselage.

University of Kansas Athletic Department

Strategic tutor, Guided and motivated student athletes by teaching strategies to better develop their skills in mathematics, Acted as peer mentor for student athletes

SKILLS

MS Word, Excel, Power Point, AeroCAD, LabVIEW, MATLAB, Advanced Aircraft Analysis (AAA), Fortran

AWARDS AND ACTIVITIES

Rocket Systems Development Organization (RSDO) 1999-present, secretary 2001-02, American Institute of Aeronautics and Astronautics (AIAA), student member, Engineering Student Council, RSDO Representative, Grantham Scholar, Dean's List

Hobbies and Interests

Sports, sports, and more sports, particularly soccer, team handball, football, Hiking, Backpacking, Camping, Guitar (trying unsuccessfully)

"I am very close to my family, both nuclear and extended. I spent my high school years in San Antonio Texas, but my parents have since moved to Colorado. I love to visit them and spend time in the mountains whenever I can. I have one older brother and together

Embry-Riddle Aeronautical University
Aerospace Engineering
Bachelor of Science, April 2003

NASA Academy Research Project:
Investigation of MgB2 for use in Far IR Bolometer Operating at 30 Kelvin
Principal Investigator: Dr. Brook Lakew; Code 693

E-mail: Smac22@hotmail.com

Present Address:
3200 Willow Creek Road
Prescott, Arizona 86301

Permanent Address:
13 Magee Court
Moraga, California 94556

WORK EXPERIENCE

Embry-Riddle Aeronautical University (2001-2002)

Campus Academic Mentor (CAM), Supported the orientation process for the incoming freshman and transfer students. Organized and ran meetings and activities to help the students get accustomed to life in college.

Embry-Riddle Aeronautical University (1999-2002),Student Tutor

Tutored in courses such as Calculus 1-3, Differential Equations, Advanced Engineering Mathematics, Physics 1-3, Modern Physics, Astrophysics, Space Mechanics, Statics, Fluid Mechanics, Solid Mechanics, Structures I, Engineering Materials Science, and Aerodynamics I.

SKILLS

Microsoft Office (Word, Excel, Power Point, Publisher), Maple V, Matlab 6.0, Visual Basic 6.0, C/C++, Satellite Tool Kit (STK), ANSYS 5.7

AWARDS AND ACTIVITIES

Kiwanis Club of Prescott (Assistant KEY Club Advisor), The Ninety Nines (Public Relations Coordinator), Women In Aviation (Public Relations Coordinator), Board of Campus Activities (Volunteer of the Year 2001), Developing Awareness, Respect, and Tolerance (DART) (Vice President), American Institute of Aeronautics and Astronautics (AIAA), Society of Women Engineers (SWE), Dr. Ronald E. McNair Scholars Program, Sigma Gamma Tau Honor Society (□□□) , Deans List (Embry-Riddle Aeronautical University 1999-2002), Valedictorian (Kent-Meridian Senior High School 1999)

HOBBIES AND INTERESTS

Collecting Videos and DVD's, Billiards, Pottery, Stained Glass Window Making

"I admit it…I'm a nerd. I can remember back in grade school when my older sister would make fun of me while I watched The Learning Channel and The Discovery Channel instead of going out to the roller rink on a Friday night. To this day I still watch the shows on the universe and the advancement of flight and the space industry. I have been interested in math and science since I was little, taking all the advanced courses that I could, graduating in the top 1% of students in my high school, and attending one of the best undergraduate Aerospace Engineering programs in the country. I have dedicated my life to the pursuit of knowledge by working on getting my BS in Aerospace Engineering then after graduation, on to a Ph.D. in Applied Mathematics and Aerospace Engineering. I plan on working for NASA, hopefully getting the chance to be a Mission Specialist (like most of the other NASA Academy participants would like to do) then eventually on to teaching and \research at a university."

Hunter College of the University of New York
Physics, minor in Mathematics
Bachelor of Arts/Master of Arts, June 2004

NASA Academy Research Project:
Applicability of Dielectric Mixing Theories of Use at Microwave
Principal Investigator: Dr. Robert Meneghini; Code: 975

E-mail: alnemir@aol.com

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2632 West 2nd Street Apt. 5H
Brooklyn, NY 11223

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2632 West 2nd Street Apt. 5H
Brooklyn, NY 11223

WORK EXPERIENCE

Research Assistant at the X-ray Absorption Fine Structure Laboratory of Hunter College (10/2001 – Present)

Use of spectroscopic techniques, primarily synchrotron based photoemission and x-ray absorption spectroscopy at the National Synchrotron Light Source at Brookhaven National Laboratories, to study fundamental and applied problems in condensed matter physics and materials science. Analysis ("fitting") of data using Feffit software.

SKILLS

Fluent in Russian, reading and writing skills, Computer literate: C++, Mathematica, Microsoft Word, Photoshop, Printshop, ATOMS, AUTOBK, FEFF, FEFFIT, ORIGIN, Internet Research

Awards and Activities

Dean's List, Honor Society of Hunter College, Golden Key International Honor Society Hunter College Physics Club, American Institute of Aeronautics and Astronautics, New York Academy of Sciences, Society of Physics Students, The Planetary Society, The Society of Rheology.

Hobbies and Interests

BW photography, traveling, reading, politics, rock-n-roll music, camping, rollerblading.

When you come to think about it, space exploration might not be a priority for the world right now. After all there is also a danger of global warming, recurring famines in Africa, AIDS pandemic, and the conflict in the Middle East. And if I were in the medical field I would worry about the AIDS statistics. If I were into the Earth sciences I would frown at the yearly increases in temperature. And if I were a politician in the Middle East certain possible outcomes of the conflict would keep me up at night. But luckily - to each its own. Space exploration might not be a priority for the world, but what matters is that it is a priority for me. And this is enough of a justification for my studies and for my goals. I have a good brain, and with a lot of hard work and self-confidence it can be made to produce amazing results. But I am not a genius, and at some things others will do better than I. However, as much as it is about one's potential, it is also about one's ambitions. I would be content to work in one of NASA research labs on one of NASA research projects. But I would feel that my talents are truly utilized if I were in a position to see a bigger picture, and contribute on a bigger scale, and not only follow the course, but help define it.

I was born a ten-hour plane flight away from where I live now. My family had a little country house away from the city, and a vegetable garden. More than any position at a prestigious NASA research lab I wish I could be six again and wake up in my sunny room. Naturally, when I retire from that prestigious research lab I will buy myself a cozy farmhouse in the middle of nowhere and grow pumpkins.

Harvard University
Earth and Planetary Science
Bachelor of Arts, June 2002

NASA Academy Research Project:
Quantifying Microwave Transmission through Dynamic Vegetation
Principal Investigator: Dr. Paul Houser Code: 974

E-mail: @mail.arc.nasa.gov

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245 Eliot Mail Center
Cambridge, MA 02138

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261 Donegal Court
Altamonte Springs, FL 32714

WORK EXPERIENCE

Summer 2001
Research Associate, NASA Goddard Space Flight Center, Laboratory for Astronomy and Solar Physics
Research Assistant on various Educational Outreach programs. Duties included compiling comprehensive lists of all NASA Earth and Space Science Missions, coding in IDL, analysis of night sky spectra of light polluted cities
Summer 2001
Personal Care Assistant, Liberty Resources, Resources for Living Independently Program
Live-in assistant for a paralyzed NASA Goddard intern. Assisted with medical and personal needs, as well as acting as a research assistant.
Spring 2001
Research Assistant, Harvard Department of Earth and Planetary Scientist, Schrag Lab
Research Assistant on project tracing El Niño over century time scales. Lab duties include mechanical and chemical processing of rainforest tree samples dating back hundreds of years.

SKILLS

Familiar with spreadsheet (Microsoft Excel), word processing (Microsoft Word, Works), and desktop publishing (Adobe PageMaker, PhotoShop) software, as well all major Internet browsers. Coding experience in Interactive Data Language and HTML. Ran business staff for student conference with two thousand attendees, managing a $100,000 budget.

AWARDS AND ACTIVITIES

Attained rank of Eagle in Boy Scouts of America. President of the Harvard Chapter of the Society for the Exploration and Development of Space (SEDS). Under-Secretary General, Harvard National Model United Nations 2001. Director, Commission on World Space Exploration, HNMUN 2002.

HOBBIES AND INTERESTS

"I was born in Buffalo, NY, where I lived until I was 8 years old. Afterwards, I moved to Houston, TX and later Orlando, FL before coming to Harvard University in the Fall of 1998. Though originally a pre-med, I realized the errors of my ways only one semester into school and rediscovered my love of space. My department has allowed me to pursue my NASA-esque dreams, as well as allowing me to backpack and travel to some beautiful places around North America."

University of Texas at Austin
Aerospace Engineering
Bachelor of Science, May 2003

NASA Academy Research Project:
Confocal Microscopy Noncontact Surface Roughness Measurement
Principal Investigator: John Blackwood, Code 541

E-mail: raviprakash@mail.utexas.edu

Present Address:
2414 Longview, Apt 309
Austin, TX 78705

Permanent Address:
2400 Pilgrim Estate Drive
Texas City, TX 77590

WORK EXPERIENCE

Research Assistant, Glenn Research Center

Generated a parallel processing program for computational fluid dynamics equations Created a program that enables various chemical species to be run in simulation

Intern, Johnson Space Center

Interpolated data to determine a mathematical relationship between solar maximum and solar minimum particle flux, performed thermal tests on space hardware (TEPC), tested suitability of TEPC software for astronauts

SKILLS

Programming: MATLAB, C, Fortran 90, Turbo Pascal, HTML, MPI (parallel processing), Software: NASTRAN, AutoCAD, Solid Works, Microsoft Excel, PowerPoint, Word, Operating Systems: Windows, Mac OS, UNIX

AWARDS AND ACTIVITIES

P.R. Chair, Sigma Gamma Tau, National Aerospace Engineering Honor Society, Secretary/Treasurer, American Institute of Aeronautics and Astronautics (AIAA), Gamma Beta Phi, National Honor Society, Community Service Organization, Design/Build/Fly Competition team, Published for contribution on analysis of radiation belt models, University of Texas' University Honors

HOBBIES AND INTERESTS

I love to water-ski, jet ski, and swim (basically do anything in the water). I also enjoy playing tennis, racquetball, and the piano. Eventually, I would like to go scuba diving and skydiving.

"I'm from the modest-sized town of Texas City (yes, there is one of those), about 20 miles down the road from Johnson Space Center. That's probably where my love for space came from. As a kid, whenever my parents and I would visit JSC, I would look in amazement at the Saturn V and other rockets on display. Today, when I visit JSC, I still look in amazement, but also with a greater appreciation for all that went into making those missions successful. To be a part of NASA, however small, is the coolest thing that has ever happened to me, and I'm sure I will cherish this opportunity for a lifetime. Oh, and one more thing, I wanna be an astronaut."

Salish Kootenai College
Environmental Science
Bachelor of Science, May 2003

NASA Academy Research Project:
Analysis of in situ remote sensing aerosol absorption data
Principal Investigator: Dr. Yoram Kauffman; Code: 913

E-mail: sktpo@ronan.net

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3329 Canyon Mill Road
Ronan, MT 59864

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WORK EXPERIENCE

Confederated Salish Kootenai Tribe

GIS technician for the Cultural Preservation Department data entry, cultural resource surveys including taking GPS coordinates for Cultural resource features, map production, analysis and presentation using ArcGIS, Digital Elevation Model and Landsat 7 imagery conducting interviews with community elders.

Interior Reforestation

Third Observer for 2000, Aerial Moose Survey for the East Kootenays January 2000; Participated as the third observer to conduct a Random Stratified Block Moose Survey for the East Kootenays, counting moose, sexing and estimating age, calculating polygon area.

Skills

Microsoft Office (Word, Power Point, Publisher, Excel, Access), Windows (2000, ME, NT) ESRI (ArcView 3.X, ArcInfo ArcGIS 8.1), Adobe (Photoshop, Illustrator), ERDAS (Mapsheets, Image analyst), Trimble Pathfinder Office, Macintosh OS.

AWARDS AND ACTIVITIES

2nd Place Science Bowl 2002 -American Indian Higher Education Consortium, 2nd Poster Presentation 2002 – AIHEC,

1st Poster Presentation 2001 American Indian Science and Engineering Society; Student Intern ESRI 2001 International Users Conference, Lawrence Livermore Scholar 2001, American Indian Science and Engineering Society, SKC chapter Historian, Society Of Advancement of Chicanos, and Native American Indians in Science SACNAS

HOBBIES AND INTERESTS

I like hiking, snowboarding, softball, volleyball, and trying out new things, and watching television traveling.

My biggest expectation of myself has become that I be a role model for others.

Where I have come from, the adversaries I have faced, and the troubles that I have persevered had at one time almost consumed me. My mom passed away when I was ten, I grew up without a stable family. I was in foster care, group homes, until I could live on my own at 16. I forgot how to trust, and learned how to ridicule myself, my dreams my ambitions. I didn't believe I would graduate high school, never would have believed I would one day be in college, I couldn't believe that Graduate school was in my future. Today, I am a few credits short of my Bachelor of Science degree, after that I will go to Grad school and get my Master's degree. I want to be an expert in GIS and remote sensing techniques- through my actions, I want to thank my family and all the role models and mentors in my life.

I hope that there is a child out there that reads this; I hope that I may inspire someone to hold true to his or her dreams; that they believe in themselves.

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Rutgers University

Mechanical & Aerospace Engineering

Bachelor of Science, May 2003

NASA Academy Research Project:

Development of a Turbo Brayton Cryocooler/ADR Designs

Principal Investigator: Robert Boyle; Code: 552

E-mail: natalieu@eden.rutgers.edu

Present Address:
20020 BPO Way
Piscataway, NJ 08854

Permanent Address:
2011 Ocean Heights Ave
Egg Harbor Twp., NJ 08234

WORK EXPERIENCE

James J. Slade Scholars Program: perform independent research in the field of piezoelectricity set up a control system operated by LabVIEW to study the performance of the piezoelectric elements
Federal Aviation Administration: William J. Hughes Technical Center
Atlantic City International Airport, Atlantic City, NJ 08405 (Summer 2001)
Participate in the design and installation of Fuel Tank Inerting Instrumentation for the B747SP
Rutgers University - Mechanical and Aerospace Engineering Department
Professor: Dr. Madara Ogot, Piscataway, NJ 08854 (July 2000-present)
Design and manufacture a water tank for the research experiments
Design of Mechanical Systems (Machine Shop) Teaching Assistant

SKILLS

Microsoft Office, ProE, IDEAS, Fortran 90, MATLAB, Familiar with LabVIEW, Ansys, and C++ Fluent in Russian, read and understand Ukrainian and Belarussian, OSHA 29 CFR 1910.146 Confined Space

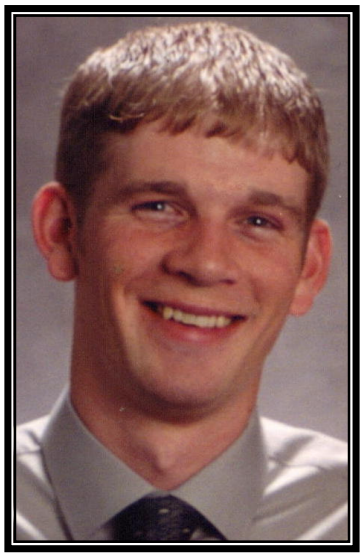
AWARDS AND ACTIVITIES

American Society of Mechanical Engineers (1999-present), Rutgers Chapter President (2000-present), Engineering Governing Council (1999-2001), Mechanical Engineering Representative for the class of 2003, Newsletter (The Moment) Committee Chair, Rutgers University Philharmonic Orchestra (1999-present) – violin, Voorhees Choir (2001-present), American Institute of Aeronautics and Astronautics (2000-present), Tau Beta Pi National Honor Society (2001), Society of Automotive Engineers (2000-present)

HOBBIES AND INTERESTS

Singing, playing violin, drawing (watercolor and pencil), calligraphy, craft making and decorating, reading, writing, working out and playing sports, star gazing and astronomy, philosophy.

From early childhood, I have been a very curious little girl with an eager, perceptive, and creative mind, which was curious to learn and explore everything. I have passion and put my heart into everything I do, ranging from my multiple hobbies to work. Besides schoolwork, research, and extra-curricular activities, I spend my free time with my friends and family whom I value and appreciate immensely. For me, there is nothing more enjoyable than just carrying on a good conversation. Also, I like to read and express myself artistically through art and music and admire and appreciate the work of others. Music has always been a big part of my life. However, what gives me the greatest pleasure is to spend time with people who are most dear to me. I just always wish I had more time, or that I could split into more than one person. Another thing that I can't live without is the outdoors, take walks, go for runs, play sports, and just enjoy the beauty of nature. I believe that each individual is capable and destined for great things, where aspiration starts from within, and it is up to him/her to work on becoming what they want to be and realize their dreams.



Utah State University
Electrical Engineering
Master of Science, December 2003

NASA Academy Research Project:
Fiber Optic Raman Laser Amplification for Remote Sensing Spectroscopy
Principal Investigator: Mark Flanegan; Code 554

E-mail: kvanhille@cc.usu.edu

Present Address:
120 W. 300 S., #3
Logan, UT 84321

Permanent Address:
595 S. 700 E.
Centerville, UT 84014

WORK EXPERIENCE

EE Assistant, Space Dynamics Laboratory

E-WINDS – A sounding rocket probe for the analysis the plasma density of the ionosphere by antenna impedance measurements. Designed, fabricated, and tested both digital and analog electronics for the instrument. USUSat – A nanosatellite to fly in a three-satellite constellation (ION-F) demonstrating formation flying and plasma measurements. Created a solar cell array fabrication procedure for nanosatellites. Developed GPIB lab instrument interfaces and created data acquisition and system test and control applications using LabVIEW.

Summer Intern, The Aerospace Corporation

BASS – A cryogenic far-infrared spectrograph sensor used for astronomical research. Developed test procedures and conducted cryogenic testing of electronic components for improving the sensor.

Computer Skills

Microsoft Office, Word Perfect Suite, C/C++, UNIX, VHDL, Verilog, Abel, various EDA packages, PSpice, HP ADS, Maple, Matlab, LabVIEW, HTML

Awards and Activities

IEEE Student Member, IEEE Student Branch S-PAVe Committee Chair, Tau Beta Pi Student Member, Dean's List, Utah State Poetry Society Junior Contest Prize Winner, Two-Year Volunteer Missionary in France

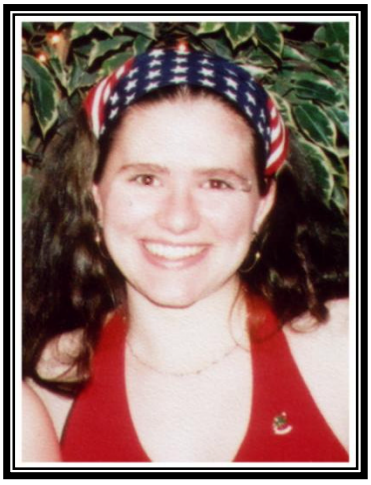
HOBBIES AND INTERESTS

I love the outdoors. I've got great destinations within a road trip's radius, too! I eat up backpacking, mountain biking, climbing, and ski trips. I loved living in France. I like speaking French. I enjoy French literature. I really do eat up French food!

I am thrilled to be a part of the NASA Academy program. I find the exploration of space interesting from both a scientific and human discovery point of view. I also enjoy the stimulating nature of the interdisciplinary challenges associated with space. I am excited to be involved with such gifted people with such an acute interest for space and life.

Ripon College
Physics and Mathematics
Bachelor of Arts, May 2003

NASA Academy Research Project:
Expanding the Spectrum of Student Astronomy Experience through an Interactive Multi-Frequency Radio Telescope
Principal Investigator: Dr. Jim Thieman; Project Code: 633



E-mail: kirkingj@ripon.edu

Present Address:
152 N. Wacouta Ave.
Prairie du Chien, WI 53821

Permanent Address:
152 N. Wacouta Ave.
Prairie du Chien, WI 53821

WORK EXPERIENCE

Summer Research Assistant, Ripon College

Rigidity Percolation Theory, Computer simulation project that simulated the compressing of a three-dimensional lattice. Looked at the effect of internal bonding of the lattice to find the elastic constant.

Computer Skills

Microsoft Office (Word, Excel, Power Point), Word Perfect, Microsoft Works, C, Fortran 90/95, Mathcad

AWARDS AND ACTIVITIES

Society of Physics Students, Physics Fun Force, *Physics outreach group,* NASA Wisconsin Space Grant Consortium Scholarship, *Research on Superstring Theory,* Campus Leadership Award, Laurel Society of Ripon College, Moral Leader of Leadership Education and Awareness Programming (LEAP), Dean's List

HOBBIES AND INTERESTS

Softball, basketball, cliff jumping, hiking, swimming, biking, astronomy

"I like to live life to the fullest. Taking advantage of every opportunity that comes my way, I enjoy challenges and new adventures."

Dr. Richard P. Fahey,

Acting Director of University Programs

For the past three decades, Dr. Fahey has been developing methods of presenting relativity and quantum theory to non-specialist audiences. During that time, he has taught courses in physics, astronomy, relativity & cosmology and in the philosophy of nature. His research work includes the spectral analysis of hot, variable stars and active galactic nuclei, atomic physics, and the study of relativistic cosmology.

Since 1998 Professor Fahey has held the Naval Space Command Research Chair at the U. S. Naval Academy, and has been the acting head of University Programs at GSFC.

BORN

July 31, 1942 in Mt. Vernon, New York, USA

EDUCATION

- A.B. St. Bonaventure University, St. Bonaventure, N.Y., 1964.
  Major: philosophy
- M.S. The Catholic University of America, Washington, D.C., 1968.
  Major: physics (elementary particles).
- American University, Washington, D.C., 1970-1972.
  Courses: general relativity & quantum field theory.
- Ph.D. The Catholic University of America, Washington, D.C., 1980.
  Major: physics (astrophysics).

EMPLOYMENT

- Goddard Space Flight Center (GSFC), Greenbelt, Md., astrophysicist, (1971-present)
- Montgomery College, Rockville, Md., physics professor, 1968-1993
- George Mason University, Fairfax, Va. (summers, 1970-1976)
- Harry Diamond Laboratories, physicist, 1970

David J. Rosage,
Program Manager of the GSFC Academy

Dave joined the Office of University Programs in 2000 after more than a decade as the Facilities Manager for Goddard's off-site Space Flight Tracking and Communications Network. Dave also supported Goddard's institutional facilities engineering and maintenance programs. After spending a year at NASA Headquarters as a participant in the Agency's Professional Development Program (PDP class of 2000), he decided to redirect his career from a technical role to one involving education and workforce development. Upon returning from NASA Headquarters, Dave worked under the guidance of the late Gerald Soffen, and led a team of three in completing a comprehensive assessment of the NASA Academy. This assignment gave him many insights into the strengths and weaknesses of the Academy program.

Following the assessment, he requested a position in the Office of University programs to continue the Academy work started by Gerald Soffen. Dave was assigned the position of Program Manager for the NASA Academy. He is also leading the Earth Sciences Enterprise's Applied Workforce Development initiative.

Dave's interest in the NASA Academy stems from his strong belief that successful organizations provide structured programs for individual development and placement. Two examples of these include team building and leadership development, both of which are fundamental to the NASA Academy.

Dave graduated from the University of Pittsburgh in 1979, and has two Masters Degrees from The Johns Hopkins University, one in Mechanical Engineering in 1993, and one in Technical Management in 1995.

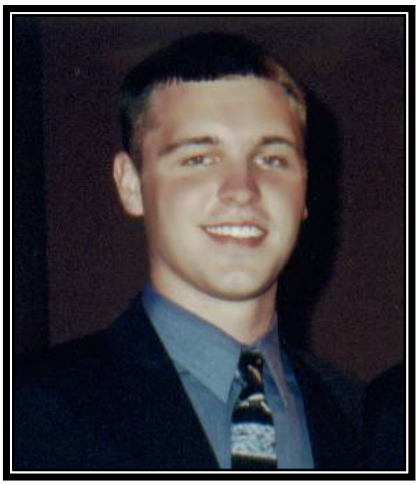
Dave has been happily married to his wife Karen for 18 years. They have a son David and twin girls Kayla and Kaitlin. The family resides in Pasadena, Maryland. Dave and Karen are avid lighthouse enthusiasts and plan on one day retiring to the coast of Maine.

Dr. Irina Nelson,
Dean of Academic Affairs

Dr. Irina Nelson holds advanced degrees in Nuclear Physics and Engineering Physics. In her earlier research and teaching career, she worked at a number of universities and research centers in Europe, before moving to the United States in 1981. Dr. Nelson has been a research fellow of the United Nations International Atomic Energy Agency (IAEA), the Swedish National Board of Technology, the German Max Planck Foundation, NATO, the U.S. Department of Energy, and NASA. She has conducted research work at the Institute of Atomic Physics in Bucharest, the International Joint Institute for Nuclear Research (JINR) in Dubna, the Synchrotron Radiation Laboratories DESY-HASYLAB in Hamburg and BESSY in Berlin, the National Synchrotron Light Source (NSLS) in New York, the National Electron Microscopy Center in Phoenix, the National Analytical Laboratory in Urbana-Champaign, and the NASA Langley Research Center (LaRC) in Hampton and Goddard Space Flight Center (GSFC) in Greenbelt. In 1989, she established her own consulting office. She is currently Research Collaborator of the Dynamics Research Laboratory of the Utah State University, Consultant with the X-ray Optical Systems (XOS), Inc. in Albany, New York, and Special Assistant for Research and Outreach in theUniversity Programs Office at the NASA Goddard Space Flight Center in Greenbelt, Maryland. As an educator, Dr. Nelson has taught physics and materials science, both in traditional classroom settings and through the Internet.

Dr. Nelson has published her work in one book, one compendium, and numerous peer reviewed journal articles; as well as conference proceedings and conference presentations. A prototype of a recently patented compact/high sensitivity X-ray fluorescent spectrometer for in-situ, real-time analysis of lubricating oils, developed as a spin-off from her work as at the NASA Langley Research Center, is currently being developed and considered for adoption by NASA, the U.S. Department of Defense, NATO, and various private industries.

Jared Henderson,
Operations Manager of the GSFC Academy



I have lived in Fayetteville, Arkansas most of my life. I am currently finishing up degrees in Physics and Computer Science as a member of the University of Arkansas class of 2002. I am an alumnus of the GSFC 2001 Academy class and can say without hesitation that it was one of the best experiences of my life.

I am fascinated by every aspect of the space program, from the specifics of the science and engineering to the economics and policy decisions that shape the program's decisions. The Academy program gave me exposure to each of these areas last year, and I can't wait to get started again in June.

Katie Gordon,
Logistics Manager of the GSFC Academy

I was one of the millions of kids who said, "I want to be an astronaut," and everyone thought that was so cute. Well, I guess I still haven't outgrown the cute stage then. Ask me what I want to be when I grow up and I will still grin and tell you I want to go to space. As I completed my freshman year of college I realized that my interests in space travel and aircraft design in general stemmed from an untapped propensity for engineering. So, I traded in my piano after twelve years, a Carnegie Hall debut, and a year of music major status and ended up with more books than I ever wanted, a lot more coffee, and enough engineering paper to destroy a rainforest. Yes, and I have loved every minute of pursuing my degree in electrical engineering (well almost every minute). After I graduate with my BS in electrical engineering, I hope to continue on to graduate school and pursue a Master's in aerospace engineering. Eventually I hope to get accepted into the astronaut corps and fill a mission specialist position on a space flight. After working on a project with fellow students that investigated possibilities for vehicles to facilitate a manned mission to Mars, I discovered a new interest in this area. I would like to be involved in some way with the future of our exploration of Mars. If all else fails, I plan to sit on my porch and read books about World War II, because history fascinates and inspires me, but I hope to be a part of making history instead.

Kenneth Murphy,
Program Support Staff of the GSFC Academy

As an Air Force brat and someone with an international focus, I have lived all over the U.S., and in both France and England. By the time my family moved to Willingham, England when I was seven, we had already lived in seven different locations, from Alaska to Arizona, from California to Pennsylvania. While in England we visited a good bit of Europe, laying the groundwork for my lifelong interest in travel, the French language, and meeting new people.

After England, we moved to Austin, TX, and later Round Rock just to the north. I've long since come to regard Austin as my spiritual home and myself as a Texan (as have so many others). Since Austin is such a wonderful place to live, I found I had to leave to finish college. This led to four years in the bitter climes of Rochester, New York, where I earned an Associate of Science in International Affairs and a Bachelor of Arts in International Business, both with honors.

After a fruitless year and a half looking for work in international business, I moved to New York City where I entered the commercial banking field. I also began getting involved with different non-governmental organizations like the United Nations Association, in keeping with my international focus. My personal time was caught up in things like park clean-ups and Model UNs for high school students. It was the fourth year that I participated as a volunteer organizer in a Model UN that my life was changed.

I was chosen to be a US delegate to the Space Generation Forum in Vienna two months later. Working with over 150 space interested youths from over 60 countries, I saw the space industry in a new light, one that illuminated the passion and fervor of those that seek to build humanity's future in space. This was a refreshing contrast to my many years in the financial industry, and introduced me to people I knew I wanted to work with.

After quick stops at the Adult Space Camp and the STAIF 2000 conference, I tendered my resignation at the Banque Nationale de Paris on July 14th, 2000 and relocated to Strasbourg, France. The next year was spent at the International Space University, with a three-month side trip to Boeing in California for my internship. It was an absolutely incredible experience (imagine NASA Academy stretched over a year). Many of the experiences were similar to NASA Academy's, such as visits to labs and rocket assembly plants, while others were unique, such as the opportunity to speak on a public panel on space education at the Paris Air Show. Working on the Mars Sample Return request for proposal at Boeing was the perfect preparation for the MSS Team Project, a small educational satellite to Mars.

Since graduation, I have continued to research areas of strong personal interest: Shuttle Privatization, ISS Commercialization, Cislunar Infrastructure Architectures, and orbital mechanics.

I eagerly look forward to the NASA Academy experience this summer, meeting all the exciting new people, and exploring how the space education community can become even stronger.

Mablelene Burrell,
University Programs Specialist

Ms. Burrell came to the Office of University Programs in 1991 as a contractor and later converted to civil service in 1994. She holds a B.S. degree in Business Education and an M.B.A. concentrating in Organizational and Personnel Management. Ms. Burrell has taught at the community college and university levels. Prior to coming to Goddard, she served as Research Project Coordinator at North Carolina A&T State University.

As University Programs Specialist, Mablelene administers higher education programs and serves as a liaison between GSFC and the university community. Ms. Burrell manages NASA-wide fellowships and grants for GSFC. Additionally, she is responsible for oversight of support contracts, procurements, and management of resources for all university programs.

Mary Floyd,
Financial and Activities Coordinator

Mary Floyd has been assisting NASA with conference planning since 1994. She works with various programs throughout NASA including EOS and Small Explorers. Prior to coming to NASA she worked for the Association of American Medical Colleges doing meeting planning. Mary has supported the NASA Academy program since 1998.

Mary Dant,
Programs Support Specialist

Mary Dant has 29 years of government experience at the NASA Goddard Space Flight Center. Prior to coming to Code 160, Ms. Dant worked on the Center Director's staff for eight years. Ms. Dant has worked in Codes 100 (Office of the Director), 200 (Management Operations Directorate), 400 (Flight Programs and Projects Directorate), 500 (Applied Engineering and Technology Directorate), and 600 (Space Sciences Directorate), giving her diverse knowledge in many areas.

Ron Cook Sr.
Event Specialist, EDUTECH, Ltd

For the past two years Ron has served as Program Support Specialist in the University Programs Office. He provides programmatic support for a variety of research and educational programs. Ron's background working with both government and the private sector industry give him unique capabilities in working with Goddard University Programs.

Adienne Byrd,
Program Support Specialist, EDUTECH, Ltd

Adrienne has worked in higher education for eight years in the areas of Residential Life, Multicultural Affairs, and Campus Activities. She transitioned from the college environment to Goddard in 1999 as Manager of the Educator Resource Center for three years. Currently, Adrienne is a Program Specialist in the University Programs Office. She earned a Bachelors degree in Sociology from Bucknell University and Masters degree in Counseling and Personnel Services from the University of Maryland at College Park.